

LISTING SHOWING THE AMENDMENT TO THE CLAIMS

This listing replaces all prior listings of claims.

IN THE CLAIMS

Amend the claims as follows:.

Claim 1, canceled.

2 (Currently amended). An organic capacitor as defined in claim ~~[[1]]~~ 10, wherein the variation of the concentration of said free charge carriers results in a variation of an effective spacing (a) of the electrodes serving as capacitor plates, and said effective spacing (a) functionally determines the capacitance.

3 (Previously presented). An organic capacitor as defined in claim 2 wherein the variation of the concentration of said free charge carriers results in a variation of an effective plate surface area, and said effective plate surface area functionally determines the capacitance.

4 (Currently amended). An organic capacitor as defined in claim ~~[[1]]~~ 10 wherein at least one of said first and second electrodes is a structured electrode.

5 (Previously presented). An organic capacitor as defined in claim 4 wherein the at least one structured electrode is embedded in said semiconducting layer.

6 (Currently amended). An organic capacitor as defined in claim ~~[[1]]~~ 10 wherein said organic capacitor comprises a second semiconductor layer located between said first and second electrodes and disposed on one of the sides of said insulator layer opposite said first semiconductor layer, the concentration of said free charge carriers in said second semiconductor layer being varied in a controlled manner by applying a voltage between said first and second electrodes.

7 (Previously presented). An organic capacitor as defined in claim 6, wherein said first and second semiconducting layers are of opposed conductance types.

8 (Previously presented). An organic capacitor as defined in claim 6 wherein at least one of said first and second electrodes is a structured electrode and the at least one

structured electrode is embedded in at least one of said first and second semiconductor layers.

9 (Currently amended). An organic capacitor as defined in claim [[1]] 10 wherein at least one of said functional layers is a layer of an organic substance.

Add the following claims:

10 (New) An organic capacitor having voltage controlled capacitance, comprising:

- a substrate;

- a first electrode supported on the substrate forming a first capacitor plate, the first electrode defining a first electrode total area value, the first electrode total area value being reduced by a plurality of spaced recesses in the first electrode and forming an electrode first surface area having a value corresponding to the reduced value;

- an organic semiconductor layer on the first electrode and in ohmic contact with the first electrode;

- an insulation layer on and in ohmic contact with the semiconductor layer; and

- a second electrode on and in ohmic contact with the insulation layer and forming a second capacitor plate, the second electrode having a second surface area value larger than the first surface area, wherein

- the concentration of free charge carriers in at least said semiconductor layer is varied in a controlled manner by application of a voltage between said first and second electrodes; wherein

- the concentration of said charge carriers determines the capacitance of the capacitor; and wherein

- the concentration of said free charge carriers in at least said semiconductor layer is additionally varied in a controlled manner by the frequency of the applied voltage.

11 (New). An organic capacitor having voltage controlled capacitance, comprising:

- at least the following functional layers:

- a first electrode, a second electrode; and

- an insulator layer between the first and second electrodes in direct ohmic contact with the first electrode; wherein

at least one first semiconductor layer is between the first and second electrodes in direct ohmic contact with the second electrode and with the insulator layer; and wherein

the concentration of free charge carriers in at least said first semiconductor layer is varied in a controlled manner by application of a voltage between said first and second electrodes;

the concentration of said charge carriers determining the capacitance of the capacitor; and

the concentration of said free charge carriers in at least said first semiconductor layer is additionally varied in a controlled manner by a frequency of the applied voltage;

wherein said organic capacitor comprises a second semiconductor layer located between said first and second electrodes and disposed on one of the sides of said insulator layer opposite said first semiconductor layer, the concentration of said free charge carriers in said second semiconductor layer being varied in a controlled manner by applying a voltage between said first and second electrodes

12 (New). The organic capacitor of claim 11 wherein said first and second semiconducting layers are of opposed conductance types.

13 (New). The organic capacitor of claim 11 wherein at least one of said first and second electrodes is a structured electrode and the at least one structured electrode is embedded in at least one of said first and second semiconductor layers.

14. An organic capacitor having voltage controlled capacitance, comprising:

a substrate;

a first electrode supported on the substrate forming a first capacitor plate, the first electrode defining a first electrode total area value, the first electrode total area value being reduced by a plurality of spaced recesses in the first electrode and forming an electrode first surface area having a value corresponding to the reduced value;

an organic semiconductor layer on the first electrode and in ohmic contact with the first electrode, which semiconductor layer is arranged to act as an insulator at relatively high frequencies in the MHz and GHz range; and

a second electrode on and in ohmic contact with the semiconductor layer on a side of the semiconductor layer opposite the first electrode and forming a second capacitor plate, the second electrode having a second surface area value larger than the first surface area, wherein the concentration of free charge carriers in at least said semiconductor layer is varied in a controlled manner by application of a voltage between said first and second electrodes;

wherein the concentration of said charge carriers determines the capacitance of the capacitor; and wherein the concentration of said free charge carriers in at least said semiconductor layer is additionally varied in a controlled manner by the frequency of the applied voltage.